



## *HORN OF AFRICA REGIONAL SYMPOSIUM*

# AGRICULTURAL POLICY, RESOURCE ACCESS, AND HUMAN NUTRITION

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## HUNGER AND MALNUTRITION

Hunger and malnutrition affect all economies, but sub-Saharan Africa is particularly afflicted. According to World Bank Development indicators (see table, p. 2), a large and increasing number of people in sub-Saharan Africa survive on per-capita incomes of less than US\$1 per day. Thirty million preschool-age children are malnourished. About one-quarter of the population is unable to secure adequate food. Vulnerable groups, particularly women, children, migrants, and the ethnically disadvantaged, bear the burden of Africa's malnutrition, and the causes are complex and multidimensional. Simple definitions of malnutrition—for example inadequate intake of protein and calories—are being expanded to include poor health and low micronutrient status, particularly of iodine, iron, and vitamin A and C.

Since the causes of malnutrition are multidimensional, so are the solutions. At a minimum there is need to better integrate linkages among agriculture, health, and nutrition, better coordinate agriculture and health interventions, and better target interventions to poor and



*More than 50% of people in Sub-Saharan Africa live in poverty*

vulnerable groups. Yet what does integration and coordination mean and how can it be achieved?

In Eastern and Southern Africa, there are wide divisions between nutrition and social scientists, and between researchers and policymakers on appropriate interventions for enhancing nutrient utilization. Nutrition and health scientists (and even many social scientists) are not trained comprehensively in the details of linkages between policy and, for ex-

## Development indicators, selected Horn of Africa countries

	Pop. <Int'l Poverty Line (%<\$1/day)	Child malnutrition (weight / height for age, % under 5)	Low birthweight babies (% of births)	Food production index (1998-91=100)	Growth in ag. GDP (1990-97)
<b>Eritrea</b>	na	44% / 38%	na	102.3	na
<b>Ethiopia</b>	46%	na/na	16%	na	3%
<b>Kenya</b>	50.2%	23% / 34%	16%	102.9	1%
<b>Tanzania</b>	na	31% / 43%	14%	97.2	3.7%
<b>Uganda</b>	69.3%	26% / 38%	na	107.7	3.8%
<b>Zimbabwe</b>	41%	16% / 21%	14%	94.8	3.2%
<b>Average</b>	<b>51.60%</b>	<b>28% / 34.8%</b>	<b>15%</b>	<b>100.98</b>	<b>2.94%</b>

Source: World Bank, World Development Indicators 1999

ample, resource access, production technology, food availability, markets, employment, income, and expenditures, nor how these connect with nutrition

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### Wide divisions exist between nutrition and social scientists, and between researchers and policymakers

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outcomes. Agricultural and social scientists tend to view these connections through different disciplinary lenses and often lack an adequate understanding of health constraints, micronutritional requirements, and interactions among food availability, health care, and nutritional intake needed in order to design an integrated nutrition policy.

## THE SYMPOSIUM

An international symposium held in Addis Ababa, Ethiopia, 3-5 November 1999, brought together more than 50 participants from teaching and research institutions, regional networks, government, and donor agencies in Eritrea, Ethiopia, Kenya, Tanzania, Uganda, the United States, and Zimbabwe to determine how these divisions might be bridged. (Papers and other information from the symposium can be found at <http://www.wisc.edu/lrc/hornreg.html>.)

Organized by the Broadening Access and Strengthening Input Market Systems Collaborative Research Support Program (BASIS CRSP) and hosted by the Organization for Social Science Research in Eastern and Southern Africa (OSSREA), the symposium sought to provide better understanding of linkages among agricultural/resource policies, health, food security, and nutrition and to identify key areas for interdisciplinary

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## Objectives

- enhance policy, health and nutrition linkages across disciplines/lines of study
  - promote dialogue among agricultural policy and nutrition scientists and practitioners
  - articulate successful policy and program interventions and their impacts
  - identify areas of collaboration among researchers and policy practitioners
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collaboration among nutrition scientists, social scientists, and policy practitioners. Specific objectives were to:

- enhance understanding of policy, health, and nutrition linkages across disciplines/lines of study,
- promote dialogue between agricultural policy and nutrition scientists and practitioners,
- articulate successful policy and program interventions and their impacts, and,
- identify areas of collaboration between researchers and policy practitioners, including advocacy, research, communication, and networking.

Major funding for the symposium was provided by BASIS CRSP through support from the health and nutrition office of USAID's East Africa Regional Office (REDSO). Additional funding was provided by the Department for International Development (DFID), the Global Livestock Collaborative Research Support Program, Food and Nutrition Technical Assistance (FANTA), LINK-AGES, USAID Global Bureau, USAID Africa Bureau, and US universities.

## Organization

Nineteen presentations were given by economists, anthropologists, nutritionists, and health professionals (see box, last page). Breakout sessions and plenary discussions between panels fostered further discussion around the following questions:

1. What programs and policy interventions have proven effective in raising income, food security, and nutrition?
2. Are there actions that might have been taken to improve the effectiveness of policy interventions?
3. Of the programs and policy interventions cited, which are the most effective in terms of impact? program costs? development sustainability?
4. Are there successful policy and program interventions not raised in the presentations?
5. What specific food security, care, and health interventions have positively impacted nutrition? What factors contributed to this success?
6. How could a gender focus improve the effectiveness of policy and program interventions?

7. How can agriculture and nutrition programs be better integrated and coordinated?
8. What are areas for improving collaboration between researchers and policy practitioners; e.g., advocacy, research, communications, and networking strategies?
9. What are the different communication and product needs of these groups? What methods, technologies, and strategies will be most effective in increasing communication among the various groups represented at the workshop and providing useful products for policy action?

## Key Findings

### *Challenges to resolving malnutrition*

The Greater Horn of Africa suffers from widespread, deep, and severe poverty, which also means widespread, deep, and

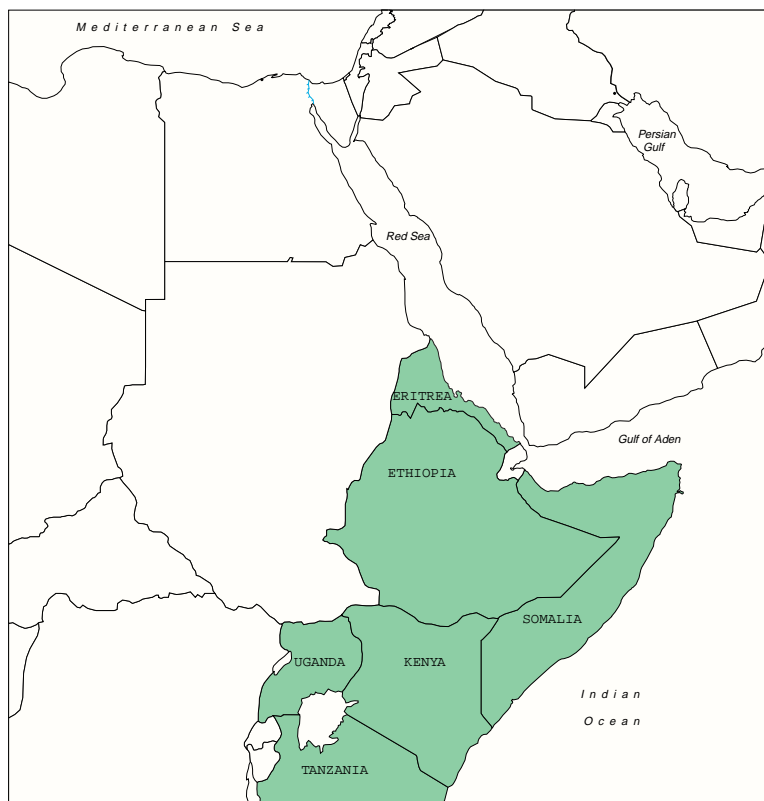
severe malnutrition. Africa is starting from unfavorable conditions, including climate, a technology gap, low stock of knowledge, limited institutional capacity, and in some cases poor governance. Considerable knowledge on health and care interventions exist, yet efforts to improve nutrition without reversing poverty and its causes could lead to unsustainable gains or dependency on short-term remedial interventions that have little potential for cost recovery.

### *Entitlements*

Various presentations helped enhance the understanding of linkages among food availability, income, food demand, and policy instruments commonly used to combat malnutrition and starvation, including *inter alia* resource policy, price policy, trade policy, food marketing, entitlements, investment policy, and health and nutrition interventions. In addition, public and private investment in physical and human capital, infrastructure, institutions that facilitate resource mobility, and safety nets are needed to enable the poor to cope with environmental or economic crises.

### *Income*

Agricultural policy and program interventions that improve income and purchasing power are necessary but insufficient conditions for improving nutritional status. Whoever controls income and expenditures within the household has an important influence on nutritional status. Income controlled by women tends to have a higher positive impact on the nutrition of children through food and health expenditures. One misconception is that food selling always negatively affects the nutritional status of the seller. What matters is how the proceeds from food selling are used; the resulting income can help diversify food intake and broaden access to micronutrients and protein sources.



Greater Horn of Africa

### *Health, care, and morbidity*

Health affects nutritional status by affecting appetite, utilization, and productivity. Malaria epidemics, HIV/AIDS, and other parasitic diseases are threats to nutritional status. Poor diets are worsened by vulnerability to disease, and health care is constrained by poverty. Nutritional studies often show the existence of stunted growth and underweight children, diets low in energy and

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### **Other effective interventions include targeting women**

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micronutrients, a high prevalence of anemia, parasites and malaria, and multiple deficiencies in biochemical micronutrients. Increasing the supply of animal source foods or nutrition supplements can improve health, nutrition, cognitive function, and educational achievement. Other effective interventions include targeting women, well-designed health and nutrition education, investments in community health care and sanitation, and participation- or community-based design.

### *Food security, health, care, and nutrition*

Both conceptual frameworks underscored the point that adequate nutrition requires both secure food availability and intake, adequate health care, and adequate access to housing, clothing, water, and sanitation. Yet, in practice, this definition proved elusive in tracing nutrition linkages. Food security and nutrition were sometimes used interchangeably. Sometimes it was noted that food security affects nutrition, while other presentations underscored how nutrition affects food security. Discussions on agricultural policy often empha-

sized the importance of increasing food availability with little or no regard for whether adequate nutrition was being served. It was noted that few agricultural activities explicitly monitor or report nutritional impacts. Health and nutrition presentations rarely mentioned the contravening role of income and poverty in sustaining their interventions. While more integration would be ideal, how, asked one government minister, is government supposed to choose from the myriad complex of policies and interventions in pursuing a nutrition-friendly path given the tight resources and limited capacity available?

### *Is nutrition a luxury?*

For the majority of the world's hungry, food security means little more than having sufficient food to eat. For nutritional interventions to be sustainable, production output needs to be increased and made more diversified to broaden and deepen nutrient intake, poverty constraints must be overcome to enable health care expenditures and purchase of food supplements, and economic



*Symposium participants*

growth must be increased to enable public expenditures in a social infrastructure that improves quality of life. Those handcuffed to poverty and desperate to find sufficient food have little opportunity to think of how to seek or obtain higher nutrition. This does not mean that a wise nutrition policy is unimportant, yet it does

mean that a nutrition policy without massive public sector interventions and aid is probably beyond the means and ability of the poor to sustain. Health care and food supplements offer valuable short-term remediation, yet without long-term and sustained increases in agricultural productivity and economic growth, nutrition will remain a luxury for the majority of the world's poor.

### *Successful projects*

A number of projects and programs have managed to successfully improve nutrition: community gardens, introduction of sweet potatoes in Kenya, agro-forestry projects in Ghana that increased child care by decreasing labor on

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## **Research and policy-making need not be carried out in isolation**

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firewood collection, community education projects, and the dairy subsector in Kenya and Uganda. Education and credit programs in Ghana were made more effective by including women's education on nutrition, management, and family planning. In Botswana, an early warning system was established that collected information on nutrition indicators and transmitted this to local, regional, and national levels, with interventions accordingly designed. In Uganda, decentralization and good leadership helped effective development interventions and increased beneficiary participation. NGO interventions in Malawi, Tanzania, and Uganda on micronutrients, particularly vitamin A and iodine, were successful. Other innovative programs were a microcredit program in Kenya that incorporated child health and school feeding schemes, and a rabbit-rearing program in Uganda. Yet overall docu-

mentation is weak, and agricultural projects typically stop at reporting production, income, or access.

### *Technology*

Remarkably few papers or discussions gave adequate consideration to the role of new technology in increasing food availability, improving the nutrient content of foodstuffs, or reducing food loss. Various papers talked about the importance of seeds, oxen, and market infrastructure as constraints to food security. Yet, too often, participants tended to focus on distributional constraints and the need to broaden participation in gaining access to markets, resources, and income. The risk in Africa is that economic returns are diminishing in efforts to liberalize markets or broaden control and access over resources. Technology is not the panacea, but neither can nutrition become sustainable without the emergence of agricultural technology that increases land and labor productivity, new employment opportunities that increase income, and food-based approaches such as dietary change and biotechnology to improve the nutritional content of foods consumed by Africans.

### *Increasing effectiveness of research*

Researchers can help introduce and promote their findings into the policymaking process by becoming policy wise, identifying strategic points for introducing research findings, identifying key decision-makers, and proposing specific solutions in clear and concise language. Research and policymaking need not be carried out in isolation. Networks on health and economic policy exist in eastern and southern Africa, but their effectiveness in bridging the gap between nutrition and social scientists and between researchers and policymakers remains to be seen. Effective and sustainable nutrition programs require a commitment to nutrition concerns, merging health,

nutrition, and agricultural interests in development projects, willingness to engage across disciplinary boundaries, and willingness of researchers to engage with policymakers and the NGO community. Engagement, commitment, and participation are key to successful program design.

## WRAP-UP AND CLOSING

**D**id the workshop achieve its objectives?

Absolutely yes, in terms of enhancing understanding of linkages among agriculture, health, and nutrition; the evaluations clearly document that a great amount of valuable learning took place by everyone in attendance. The symposium also promoted valuable dialogue among agriculturists, nutrition scientists, social scientists, and health professionals; interdisciplinary discussions were open, meaningful, engaging, welcoming of collaboration, and fruitful. Yet, in the end, the divisions were probably not sufficiently narrowed to enable concrete collaboration; the time was too short, the divisions too wide, and the scope of issues too expansive. Beyond widespread recognition of the willingness and need for better integration of agriculture and nutrition, few specific strategies were proposed to achieve this outcome. Many participants felt there was need for one or more follow-up workshops. Others articulated the need for pilot projects that would include multidisciplinary teams engaged in comparative work across countries in the region.

These shortcomings aside, much that was useful was accomplished. The very fact that divisions were validated at the symposium provides the impetus for future strategies and fora to narrow the differences. The need for better integration among agriculture, health, and nutrition is recognized; the critical

questions are how to achieve this outcome and what to do next.

The symposium began the process of establishing achievable, concrete, and sustainable priorities for future research, advocacy, communication, and networking strategies. Suggested follow-up actions and focal points to coordinate these actions were proposed:

1. **Methodology:** (i) blend the two conceptual frameworks that illustrate the functional link among agricultural productivity, increased household income, and improved nutrition, and (ii) break down the unit of analysis from household to different individuals in the household to reveal household dynamics.
2. **A practical research agenda:** (i) strengthen close collaboration among researchers, community groups, and policymakers, (ii) initiate consultation on nutrition at the national level, (iii) implement advocacy at the community level, and (iv) improve the documentation and dissemination of success stories.
3. **Specific issues:** (i) assess nutrition impacts by other programs, (ii) form coalitions between relevant networks, (iii) forge closer relations with public health and medical associations for advocacy purposes, (iv) promote communication methods, and (v) integrate nutrition in education.

BASIS CRSP, OSSREA, and USAID were urged to develop a strategy to continue work on this initiative, including making findings from this workshop widely available, developing a future agenda to promote integration of agriculture, health, and nutrition, promoting comparative work, integrating networks, and securing financing. The challenges are big but so are the rewards.





B A S I S

## B r i e f s

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Photo p. 1 by

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## Workshop Organization and Presentations

### Keynote Address

*Malnutrition in the Greater Horn of Africa: Scope, Issues and Challenges*,  
Ali Abdel Gadir Ali

### Panel I. Linkages Between Policy and Nutrition: Conceptual Framework

*Agricultural Policy, Employment and Resource Access: Micro-Foundations for Sustainable Nutritional Improvements*, Jean-Paul Chavas, Michael Roth, and Alex Uriarte

*Determinants of Malnutrition: Food Security, Care and Health*, Olivia Yambi and Festo Kavishe

### Panel II. Linkages among Economic Growth, Income, Food Availability, and Nutrition

*Market Liberalization and Household Nutrition in Kenya*, James K. Nyoro and Wilson Nguyo

*Impacts of Agricultural Interventions*, Patricia Bonnard

*Food Security and Resource Access: Preliminary Findings from the Community Assessments in South Wello and Oromiya Zones of Amhara Region, Ethiopia*, Yared Amare, Yegremew Adal, Degafa Tolossa, A. Peter Castro, and Peter Little

*Microdynamics of Resource Access and Poverty: Policy Implications for Food Security in South Wello and East Gojam, Ethiopia*, Tegegne Gebre Egziabher, Mulat Demeke, and Michael Roth

### Panel III. Policy and Program Interventions to Improve Nutrition: Alternative Approaches

*Livelihoods in the Drylands of East Africa*, Abdel Ghaffar Ahmed and Tegegne Teka

*Animal Products and School Performance in Kenya*, Nimrod Bwibo and Charlotte Neumann

*Improving Household Food Security: Institutions, Gender and Integrated Approaches*, Charlotte Johnson-Welch, Bogalech Alemu, Theresia Peter Msaki, May Sengendo, Hilda Kigutha, and Antonia Wolff

*Integrating Agriculture and Nutrition Programs: NGO Approaches and Lessons Learned*, Muhoro Ndung'u and Dan Maxwell

### Panel IV. Improving Nutrition through Food, Care, and Health Policies and Programs: A Nutrition Perspective

*Affecting Nutrition through Health and Care Interventions*, Robert Mwadime

*The Importance of Gender in Agricultural Policies, Resource Access and Nutrition*, Charity Kabutha

*Internet Tools to Assist in Documenting Complex Relationships and Accessing Information on Policy and Nutrition*, Joshua Dein and Suzanne Boardman

### Panel V. Integrating Agricultural/Resource Policy and Nutrition: Identifying Key Messages and How to Communicate Them

*Malnutrition and National Development: The Human and Economic Costs of Malnutrition*, John Owour

*From Research to Policy Action*, Cheryl Morden

*Health and Nutrition Networks in East, Central and Southern Africa*, Boitshepo Giyose  
*Networking Agricultural Research and Policy in Eastern and Southern African Countries: Some Thoughts for Discussion*, Lucian Msambichaka

*Food and Nutrition Policy: How to Move Research to Policy and Program Action*, Joyce Chanetsa